

2011 Canada Goose Spring Population Estimate

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Between April 5–18, 2011, Canada geese were counted on 163 survey plots in Iowa, 69 of which were located in Iowa's portion of the prairie pothole region (PPR) and 94 in the rest of the state (ROS) (Fig. 1). Each survey plot is 2 square miles in size. All geese observed on each plot were included in the count. The plots were surveyed using an Enstrom F28C turbocharged helicopter provided by P&N Helicopters, Marion, IA. One hundred sixty-five plots were randomly selected for this survey (70 in the PPR and 95 in the ROS) when the survey was designed in 2005, but time and fuel limitations prevented surveying all the plots. Additionally, 3 survey plots were counted from the ground by wildlife staffers Carl Priebe, Jim Jansen and Mike Griffin.

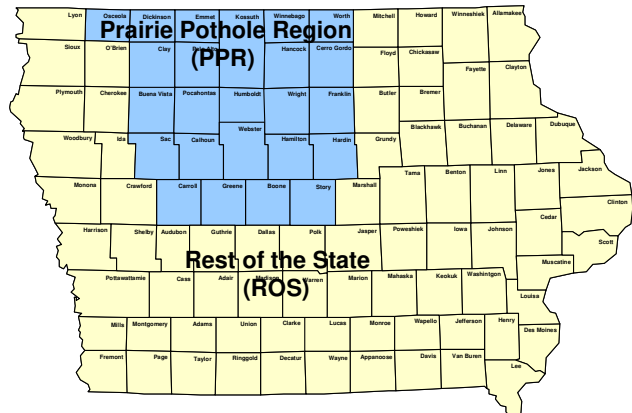


Figure 1. Canada goose survey regions.

The Canada goose population for 2011 was estimated to be 105,738 ($\pm 19,935$) ($\pm 95\%$ Conf. Limit), which is statistically unchanged from the 2010 estimate of 96,738 ($\pm 14,764$) (Table 1). Following substantial growth in the 1990s and early 2000s, Iowa's Canada goose population has been nearly stable for the past 7 years (Fig. 2). The number of indicated pairs, the breeding component of the population, has remained statistically unchanged for the past 6 years. The most notable change in goose numbers in 2011 compared to 2010 was the increase in the number of geese observed in groups. The geese observed in groups are 1 or 2-year old non-breeding geese. These immature geese usually gather in groups and migrate north to molting areas, some traveling as far north as Hudson Bay in Canada. When the survey is completed by mid April, as it was in 2006 and 2009, or when spring phenology is delayed, as it was this year, more geese are observed in groups.

The National Wetlands Inventory data for Iowa that was used in designing this survey in 2005 indicated that only 31% of the state's 57,000+ sq. miles contained potential goose nesting habitat. In other words, two-thirds of the state's sections do not contain suitable goose nesting habitat, which will ultimately limit the size of the goose population in Iowa. Of the 17,760 square miles in Iowa that contain potential goose nesting habitat, only 18% are located in Iowa's PPR. However, almost 30% of the Canada geese in Iowa reside in the 25-county PPR. The PPR has excellent goose production potential because wetlands in this region usually have stable spring water levels and good numbers of muskrats. Muskrat houses are ideal nesting and loafing sites for geese, so marshes often have high densities of nesting geese and consistent year-to-year production. Geese in the ROS, with the exception of the southern Iowa farm pond region, often nest on floodplain wetlands that can be inundated during heavy rain events. Geese using farm ponds seldom have muskrat houses to nest on, so they nest on the shore where they are vulnerable to predators. As a result, the reproductive potential of geese nesting in the ROS is generally lower than geese nesting in the PPR.

Rain events during the past two weeks caused some bottomland flooding that may have destroyed some floodplain goose nests. Barring any further flood events, I expect production to be average to slightly above average this year.

Table 1. Canada goose population estimates for Iowa from aerial surveys conducted in April during 2005-2011.

Year	Prairie Pothole Reg.		Rest of the State		Statewide Total	
	Estimate	± 95% C.I.	Estimate	± 95% C.I.	Estimate	± 95% C.I.
Total Geese^a						
2005	27,300	± 6,185	63,841	± 13,333	91,141	± 14,787
2006	32,637	± 7,767	68,823	± 14,279	101,460	± 16,349
2007	31,278	± 7,494	62,090	± 14,446	93,367	± 16,370
2008	28,100	± 7,174	60,683	± 11,699	88,784	± 13,620
2009	33,314	± 6,918	71,530	± 15,530	104,844	± 16,878
2010	31,497	± 6,824	65,241	± 13,200	96,738	± 14,764
2011	30,671	± 7,321	75,067	± 18,672	105,738	± 19,935
Indicated Pairs						
2005	10,699	± 2,297	25,313	± 5,325	36,012	± 5,835
2006	12,345	± 2,433	25,140	± 4,628	37,485	± 5,259
2007	11,235	± 2,083	26,244	± 6,028	37,479	± 6,418
2008	11,751	± 2,652	25,601	± 5,555	37,352	± 6,113
2009	11,709	± 2,308	29,363	± 6,024	41,072	± 6,405
2010	12,287	± 2,418	27,578	± 5,640	39,865	± 6,099
2011	12,363	± 2,725	28,949	± 6,661	41,312	± 7,154
Geese in Groups						
2005	5,902	± 2,418	13,215	± 5,160	19,117	± 5,733
2006	7,947	± 3,342	18,543	± 7,492	26,491	± 8,254
2007	8,807	± 4,247	9,601	± 4,407	18,409	± 6,149
2008	4,598	± 2,687	9,481	± 4,104	14,079	± 4,868
2009	9,897	± 3,305	12,803	± 6,674	22,700	± 7,393
2010	6,923	± 2,350	10,085	± 3,751	17,008	± 4,396
2011	5,946	± 2,849	17,168	± 8,549	23,114	± 8,958

^aTotal Geese = (Indicated Pairs x 2) + (Geese in Groups)

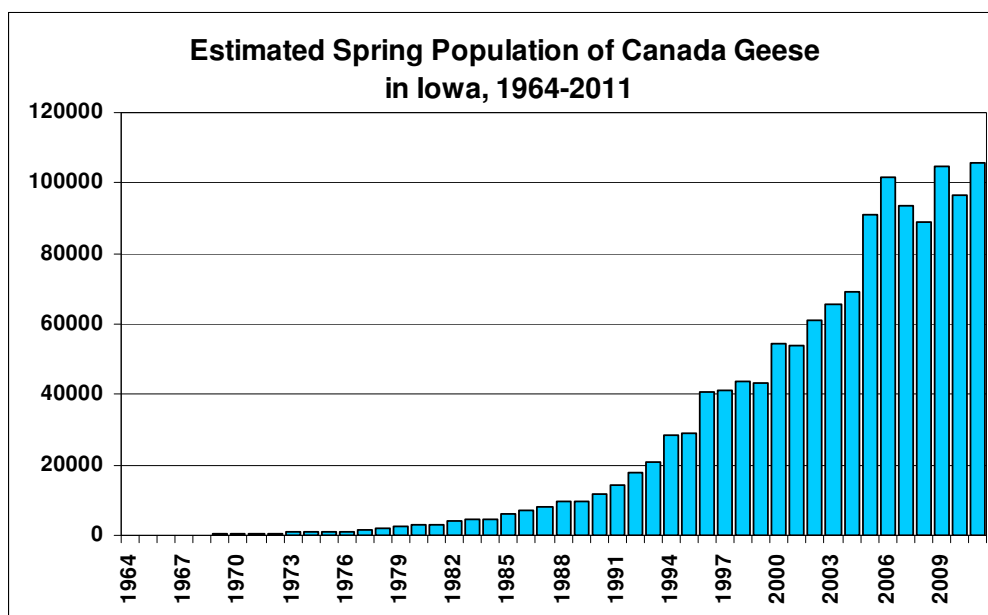


Figure. 2. Estimated spring population of Canada geese in Iowa during 1964-2011.